

In WO 02/052800, a method is disclosed for adjusting data flow from an external network to a user terminal. A data flow control algorithm performed by a packet control unit works with a network node from which the packet control unit receives data packets. The packet control unit indicates to the network node the actual transmission rate of a specified data flow and the buffering capacity for the data flow. More specifically, the sending rate from a SGSN to a BSC is controlled in order to avoid overflow and under-run of buffers in the BSC. Actual bit rate for controlling the buffers in the BSC and the SGSN utilizes layer 2 to layer 2 signaling.

In WO02/093866 a method of communicating multimedia information over a network is disclosed. The problems addressed are related to available transmission rate of the downlink channel. D2 provides a method for estimating available transmission rate in a downlink channel by calculating a ratio of the smoothed round trip time of packets sent to the receiver and a smoothed congestion window associated with the downlink channel.

In addition many of the prior art solutions are client-centric, that is, they make use of feedback messages from the end-user in the mobile system to control the quality-of-service for the end-user. A drawback with client-centric solutions is that it takes a fairly long time until the client, with certainty, detects a change in the available bandwidth on the connection over the air-interface. Since the radio environment is unstable the client is required to perform filtering or mean value calculations over long periods of time before it can send reliable feedback messages. Furthermore the feedback messages from the end-user must be transmitted over a radio connection to the control system which adds additional delay to the input data to the control system.

SUMMARY OF THE INVENTION

Embodiments of the present invention relate to addressing issues and "setting up" a rate control service. Specifically, embodiments of the present invention set up a flow control or rate control mechanism for a bit transfer session between a client in a mobile system and an application server by means of a transport. The rate control mechanism may be associated with a number of rate control parameters. Disclosed are several embodiments that "set up" or configure the addressing for rate control mechanisms within a network. Embodiments of the invention makes use of feedback information from a radio resource managing entity to set and update flow control parameters throughout the session. Once the rate control mechanism is configured or "set up" a radio resource managing entity can communicate with a network entity to optimize rate

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control parameters, which allows for enhanced QoS and efficient use of available radio resources.

According to one aspect of the present invention a method is provided for setting up the controlling of the transmission of data bits in a bit transfer session for transmitting data information from an application server to a client, the bit transfer session involving bit transfer over a wireless communications link by means of a transport protocol with a flow or rate control mechanism. The method includes setting up a network entity so that it can receive information from a radio resource managing entity about the available bandwidth for the wireless link, the network entity then updates at least one parameter relating to the rate control mechanism of the transport protocol in response to receiving the information so that the transmission rate of the session can be controlled in accordance with the received information.